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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,776	10/10/2000	Makoto Harada	198156US-2S CONT	3405

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EXAMINER	
WILLS, MONIQUE M	

ART UNIT	PAPER NUMBER
1746	

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/684,776	HARADA ET AL.	
	Examiner	Art Unit	
	Wills M Monique	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/3/2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

This office action is responsive to the amendment filed November 21, 2003. The rejection of claims 1,2 & 6 under 35 U.S.C. 102(b) as being anticipated by Horiuchi et al. U.S. Patent 5,911,961 is maintained. The rejection of claims 1-6 under 35 U.S.C. 102(e) as being anticipated by Iizuka et al. U.S. Patent 6,045,764 is maintained. The rejection of claims 7-9 under 35 U.S.C. 103(a) as being unpatentable over Iisuka et al. U.S. Patent 6,045,764 and further in view of Horiuchi et al. U.S. Patent 5,911,961 is maintained. Finally, claims 10-11 remain to be rejected under 35 U.S.C. 103(a) as being unpatentable over Iisuka et al. U.S. Patent 6,045,764 and further in view of Tabatabaie-Raissi et al. U.S. Patent 6,334,936. Applicant's arguments in the instant amendment were unpersuasive, and the rejections are made final. A brief reiteration of the rejections is cited below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2 & 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Horiuchi et al. U.S. Patent 5,911,961.

Horiuchi teaches a reaction vessel having gas inlet and outlet ports (col. 12, lines 55-68), and a catalyst of platinum and/or palladium with a zinc, iron or titanium oxide carrier (Table 1). The carriers inherently have base points on their respective surfaces. Therefore, the instant claims are anticipated by Horiuchi.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Iizuka et al. U.S. Patent 6,045,764.

Iizuka teaches a reaction vessel having inlet and outlet ports (Fig. 5a), and a catalyst comprising platinum, lanthanum or cerium on a titanium oxide support (col. 2, lines 60-68 & col. 3, lines 1-6). The carrier inherently has a base point on its surface. The platinum is supplied in an amount of 0.01 to 3.7 % by weight, and cerium or lanthanum is supplied in an amount of 0.01 to 36 % by weight. See column 3, lines

5-15. Therefore, the instant claims are anticipated by Iizuka.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over, Iisuka et al. U.S. Patent 6,045,764 as applied to claim 1 above, and further in view of Horiuchi et al. U.S. Patent 5,911,961.

Iisuka teaches an exhaust gas purifying method employing a catalyst comprising platinum and/or palladium on a titanium oxide support. The platinum is supplied in an amount of 0.01 to 3.7 % by weight and cerium or lanthanum is supplied in an amount of 0.01 to 36 % by weight. See column 3, lines 5-15.

The reference is silent to an iron oxide support.

However, Horiuchi teaches the functional equivalence of titanium and iron as oxide carriers for platinum/palladium catalysts (Table 1).

Iisuka and Horiuchi are properly combinable art because they are from the same field of endeavor, namely, fabricating catalyst to treat carbon monoxide emissions in engine exhaust.

Therefore, because these oxide carriers were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute iron for titanium as an oxide carrier of Iisuka.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over, Iisuka et al. U.S. Patent 6,045,764 as applied to claim 1 above, and further in view of Tabatabaie-Raissi et al. U.S. Patent 6,334,936.

Iisuka teaches an exhaust gas purifying method employing a catalyst comprising platinum and/or palladium on a titanium oxide support. The catalyst is employed in a reaction vessel comprising a plurality of gas-permeating plates in sections between the inlet and outlet (Fig. 5a).

The reference is silent to a cooling coil, and an alternating arrangement of the cooling coil and catalyst.

However, Tabatabaie-Raissi teaches that it is conventional to employ cooling coils in similar catalytic reactions to improve the mass transfer characteristics of the catalytic reactor (column 6, lines 20-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a cooling coil in Iisuka, in order to improve the mass transfer characteristics of the catalytic reactor.

Regarding alternating arrangements of the cooling coil and catalyst, it would have been obvious to employ multiple alternating cooling coils and catalysts, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Response to Arguments

Applicant's arguments filed November 21, 2003 have been fully considered but they are not persuasive. Applicant asserts that Iizuka and Horiuchi are patentably distinct from the present claims, because they do not teach a transforming apparatus in which carbon monoxide and water are reacted to produce hydrogen and carbon dioxide. More specifically, in the instant amendment, applicant has included the reaction process that takes place in the transforming apparatus to overcome the references of record. This approach merely describes the materials worked on by the appartus, and does not further limit the structure. According to MPEP 2115, "expressions relating the

apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." Ex parte Thibault , 164 USPQ 666, 667 (Bd. App. 1969). Further, "inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." In re Young , 25 USPQ 69 (CCPA 1935) (as restated in In re Otto , 136 USPQ 458, 459 (CCPA 1963). Therefore, the present amendment does not impart patentably to the claims.

Conclusions

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is

(571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 571-272-1302.

The Official fax number is 703-872-9306.

Mw

0/00/04

Bruce Bell
BRUCE F. BELL
PRIMARY EXAMINER
GROUP 1746